

ONE HUNDRED TRANSFERS FROM ALLOPLECTUS AND COLUMNEA
(GESNERIACEAE)

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Alloplectus Mart. and Columnea L. are large genera in the tribe Episcieae Endl. of the neotropical subfamily Gesnerioideae. The boundaries of these two genera have become vague and overlapping with the addition of much diverse material, to a combined total of over 330 species. This includes undescribed herbarium material and collections recently brought into cultivation. A study of all the taxa of the neotropical Gesneriaceae in general (resulting in a new classification, Wiegler, 1974), and a detailed investigation of the genera Alloplectus and Columnea in particular, indicate: 1. that a thorough knowledge of all the genera of the tribe Episcieae is an absolute prerequisite to a clearer delimitation of Alloplectus and Columnea; 2. that these two genera are sound taxonomic units in the original sense of their authors; 3. that the sections into which these two genera are presently divided are unsatisfactory and outdated; 4. that this aggregation of 330 species actually comprises seven quite natural groups all of which should have generic standing on equal footing with the rest of the genera of the Gesnerioideae; 5. that this regrouping does not require the erection of new genera, only the re-institution of four names published previously; and 6. that, in addition, a number of species now attributed to Alloplectus and Columnea need to be transferred to other genera of the tribe Episcieae.

Each of the reconstructed generic groups will be given a complete treatment later, with keys and descriptions of species and novelties. The present paper deals only with a clarification of the limits of Alloplectus and Columnea and the transfer of excluded species, both urgent and necessary to avoid confusion of named material already in cultivation, and to aid botanists currently involved in neotropical floristic studies.

The basis for the proposed transfers has been the examination of the available holotypes and/or isotypes of the species treated, and all available additional material (loans from the major herbaria total over 9000 sheets), and extensive field work in South America, as well as seven years of greenhouse observations. The friendly assistance of the curators of the herbaria involved is here gratefully acknowledged.

The decisive factors in this proposed regrouping of genera have been a better knowledge of the taxonomic characters employed,

especially new information on the fruit, and the result of hybridization experiments. The critical generic characters are, in order of importance: 1. the type of fruit, 2. the number of nectary glands, 3. the plant habit or pattern of growth, and 4. the shape of the corolla. An additional stamen feature is used for the species to be transferred to Drymonia Mart.. The fruit is either a fleshy capsule or a berry of a characteristic shape and color. The form of the nectary plays an important systematic role in the other tribes of the Gesnerioideae. In the Episcieae the nectary is usually reduced to two large connate dorsal glands near the base of the ovary, giving the appearance of one large single gland. In two of the groups separated from Alloplectus and Columnea the nectary condition is more primitive (see key below). A distinct pattern of shoot growth earmarks another group (Dalbergaria). The shape of the corolla is significant in view of the strong assumption that all of the 330 species involved are pollinated exclusively by hummingbirds (cf. Wiegler, 1972b). The color of the corolla is typically either red, orange, or yellow, or shades or combinations thereof. The hybridization experiments (Sherk & Lee, 1967; Wiegler, unpublished data) indicate zero per cent hybrid pollen stainability for all intergeneric crosses (as understood here), although interspecific combinations (in Columnea sensu stricto, within Dalbergaria, within Ortholoma, and within Pentadenia) reveal high degrees of pollen stainability. Within the Gesnerioideae, such hybridization data helps to indicate levels of relationship (Wiegler, 1970).

Alloplectus Mart. (Nov. Gen. et Sp. Pl. 3:53, 1829, name conserved) thus emerges as a genus of about 65 species with a center of distribution in the Andes of Ecuador and Colombia. Most of the species are terrestrial rain or cloud forest plants with large, opposite decussate leaves, but a few are scandent epiphytes with small leaves. The inflorescence is usually a pendent simple or compound cyme (the gesneriaceous cyme, Wiegler, 1974), often reduced to 1-2 flowers, usually with a shortened peduncle. The corolla has typically either a constricted throat with a nearly regular narrow limb and an inflated Hypocyrta pouch below the entrance (A. ichthyoderma Hanst.), or it is shaped like the Nematanthus corolla, with a widened throat laterally compressed, as in A. tetragonos (Oerst.) Hanst.. A distinguishing feature is the specialized type of fruit, a fleshy capsule in which the two valves recoil at maturity, displaying a compact and pulpy cone-shaped mass of enlarged fleshy funicles and seeds. The genus Drymonia, characterized by a unique set of anthers, shares the same type of fruit. Alloplectus ($n=9$) can be separated from the southeast Brazilian genus Nematanthus Schrader (including Hypocyrta Mart., both $n=8$) by the presence of an adaxial hypodermis in the leaves of the latter and by the difference in chromosome numbers. The proposed new lectotype of the genus will be A. hispidus (H.B.K.) Mart., a matter to be treated in a separate paper (cf. Wiegler, 1972b).

The genus Columnea L. (Sp. Pl. 638, 1753) would now be restricted to the section "Eucolumnea" of Hanstein, last defined by Fritsch in Engler & Prantl, Nat. Pflanzenfam. 4(3b):170 (1894). This is a group of about 75 species, with a center of distribution in Costa Rica and Panama. The type species is C. scandens L. from the West Indies.

Key to the genera separated from Alloplectus and Columnea

1. Fruit a fleshy bivalved capsule
2. Anther locules dehiscing by pores at the lower end; plants predominantly vining epiphytes, a few species terrestrial

Drymonia (110+ spp.)

2. Anther locules dehiscing by longitudinal slits; plants terrestrial, some epiphytic; inflorescence pendent; nectary a connate double dorsal gland

Alloplectus (65 spp.)

1. Fruit a berry
3. Plants terrestrial; inflorescence erect; berry black (or transparent, with black seeds shining through); nectary consisting usually of 2 or 4 opposite separate glands, rarely reduced to a connate double dorsal gland

Corytoplectus (8 spp.)

3. Plants epiphytic; berry white, red, orange, yellow, or lavender
4. Nectary consisting of 5 separate glands, or 4 glands, with the 2 dorsal glands connate; berry globose, white or lavender

Pentadenia (24+ spp.)

4. Nectary a connate double dorsal gland
5. Suffrutescent, usually unbranched shoots of a distinct fern-frond-shaped habit, with the subsessile leaves in close-set imbricating distichous pairs of which one is stipule-like, the other large, narrow and oblanceolate, the pairs alternating in respect to their sizes; berry ovoid, yellow, orange, or red; corolla usually tubular or somewhat inflated, with a subregular narrow limb, but bilabiate and Columnea-like in some species (the large lamina often with red extrafloral attraction patterns)

Dalbergaria (65+ spp.)

5. Shoot habit never like a fern frond; plants either thin-stemmed, pendent, scandent, or suffrutescent, branched, and erect, the opposite leaf pairs of equal or unequal size, or leaves whorled

6. Corolla with a narrow, gradually widening (never inflated) tube, with a distinct galea and a long and narrow reflexed lower lobe; berry globose, white

Columnea (75 spp.)

6. Corolla either tubular throughout or inflated, with a sub-regular limb (a galea present only in combination with a strongly inflated tube); berry globose or ovoid, usually colored a shade of red, sometimes white

Ortholoma (70+ spp.)

A. Transfers from Alloplectus and Columnea to Corytoplectus

Corytoplectus Oersted, ampl. Wiegler

Alloplecto Mart. affine, a quo fructu baccato, inflorescentia umbellata-cymosa erecta, et plerumque numero glandium nectari-ferrarum differt.

Plantae semper terrestres, caules succulenti, folia opposita decussata. Bracteae inflorescentiarum praesentes vel absentes. Sepala aequalia sed forma variantia. Numerus glandium 4, 2, vel raro 1. Stigma capitatum vel bilobum.

Corytoplectus Oerst., Centralamer. Gesner. 45 (1858)

Synonyms: Diplolegnon Rusby, Bull. Torr. Bot. Cl. 27:29 (1900)

Alloplectus Mart., pro parte

Type sp.: Alloplectus capitatus Hook., as cited by Oersted

= Corytoplectus capitatus (Hook.) Wiegler, see below.

Etymology: corytos, leather pouch, quiver; plectus, pleated, folded; = (the calyx) gathered like a leather pouch.

Corytoplectus is a genus of terrestrial herbs with fleshy or suffrutescent stems. The opposite-decussate leaves are usually of equal size. Corytoplectus can be separated from its ally Alloplectus by the inflorescence, an upright umbellate structure (versus a pendent cyme or solitary flower in A.), and, more importantly, by the fruit, a globose berry in Corytoplectus, a fleshy capsule in Alloplectus. The nectary consists of 4 or 2 separate glands in all but two northern species, C. capitatus and C. congestus. The five calyx lobes have the same shape and size, except that the dorsal lobe is narrowed in some species. The corolla insertion into the calyx appears almost vertical. The corolla is tubular, with some ventral inflation, constricted in the throat, and with a narrow limb of five lobes, usually of equal size. The seeds are black. The eight known species occur in cloud forest areas of the Andes, from Bolivia to coastal Venezuela, and in a similar habitat in the Guiana Highlands.

1. Corytoplectus capitatus (Hook.) Wiehler, comb. nov.
Basionym: Alloplectus capitatus Hook., Bot Mag. 75:t.4452 (1849)
Synonyms: Columnea capitata (Hook.) Kuntze, Rev. Gen. 2:472 (1891); Crantzia capitata (Hook.) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894)
2. Corytoplectus congestus (Lind. ex Hanst.) Wiehler, comb. nov.
Basionym: Alloplectus congestus Lind. ex Hanst., Linnaea 34: 371 (1865)
Synonyms: Columnea congesta (Lind. ex Hanst.) Kuntze, Rev. Gen. 2:472 (1891); Crantzia congesta (Lind. ex Hanst.) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894); Alloplectus zamorensis Lind. & André, Ill. Hort. 19: 352 (1872); Hypocyrtia pulchra N.E.Brown, Gardener's Chron. Ser. III, 16:244 (1894); Bot. Mag. 122:t.7468 (1896)
3. Corytoplectus deltoideus (Morton) Wiehler, comb. nov.
Basionym: Alloplectus deltoideus Morton, Fieldiana, Bot. 28: 521 (1953)
4. Corytoplectus latifolius (Rusby) Wiehler, comb. nov.
Basionym: Columnea latifolia Rusby, Descr. New Sp. S. Amer. Pl. 126 (1920)
5. Corytoplectus riceanus (Rusby) Wiehler, comb. nov.
Basionym: Diplolegnon riceanum Rusby, Bull. Torr. Bot. Cl. 27: 29 (1900)
Synonym: Alloplectus grandifolius Britt., ibidem, p. 30
6. Corytoplectus schlimii (Planch. & Lind.) Wiehler, comb. nov.
Basionym: Alloplectus schlimii Planch. & Lind., Fl. Serres Jard. Eur. 8:211, t.827 (1852-53)
Synonym: Columnea schlimii (Planch. & Lind.) Kuntze, Rev. Gen. 2:472 (1891)
7. Corytoplectus speciosus (Poepp.) Wiehler, comb. nov.
Basionym: Alloplectus speciosus Poepp., in Poepp. & Endl., Nov. Gen. et Sp. Pl. 3:6 (1845)
Synonyms: Crantzia speciosa (Poepp.) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894); Alloplectus corymbosus Kl. ex Hanst., Linnaea 34:371 (1865); Columnea corymbosa (Kl. ex Hanst.) Kuntze, Rev. Gen. 2:472 (1891); Crantzia corymbosa (Kl. ex Hanst.) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894); Alloplectus vittatus Lind. & André, Rev. Hort. 42: 227 (1870); Ill. Hort. 17:72, pl.13 (1870); Alloplectus poeppigiana Kuntze, Rev. Gen.2:472 (1891)

B. Transfers from Columnea and Alloplectus to Pentadenia

Pentadenia (Planchon) Hanstein, ampl. Wiehler

Corolla tubulosa vel leviter inflata vel subcampanulata inflata. Limbus subaequalis vel bilabiatus vel lobi dorsales in galeam connati. Glandes discretae 5, interdum dorsales in unam connatae. Fructus bacca.

Pentadenia (Planch.) Hanst., Linnaea 26:211, 186-187 (1854); cf. Oersted, Centralamer. Gesner. 57 (1858)

Basionym: Columnea L., subg. Pentadenia Planch., Fl. Serres Jard. Eur. 6:45, t.552 (1850); cf. Hanstein, Linnaea 34:397 (1865)

Synonyms: Columnea L., sect. Pentadenia (Planch.) Benth., in Benth. & Hook., Gen. Pl. 2:1010 (1876); Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):170 (1984)
Stygnanthe, Hanst., Linnaea 26:209, 185 (1854);
Columnea L., sect. Stygnanthe (Hanst.) Benth., in Benth. & Hook., Gen. Pl. 2:1009 (1876)
Flueckigeria Rusby, Bull. Torr. Bot. Cl. 21:488 (1894); non Flueckigeria Kuntze (1891)

Kohlerianthus Fritsch, in Engler & Prantl, Nat. Pflanzenfam., Nachtr. I:300 (1897)

Type sp.: Pentadenia aurantiaca (Decne. ex Planch.) Hanst., Linnaea 26:211 (1854) = P. strigosa (Benth.) Hanst., see below.

Etymology: penta-, five; dens, tooth, point, prong; = (the nectary consisting of) five teeth.

Pentadenia may be separated from related genera by the presence of five individual nectary glands of which the two dorsal ones are sometimes connate. All of the 24 collected species of which one half are still undescribed, are epiphytes. The corolla tube varies from tubular to strongly inflated, and the corolla limb varies from subregular to bilabiate, with the two dorsal lobes sometimes fused into a galea as in the Columnea flower. The fruit, unknown to Hanstein, is a globose berry, usually white, but in a few species lavender. Inhabiting cloud and rain forests, the species are distributed from the Andes of Bolivia to coastal Venezuela and northwards to Mexico.

1. Pentadenia ascendens (Rusby) Wiehler, comb. nov.

Basionym: Columnea ascendens Rusby, Mem. Torr. Bot. Cl. 4:239 (1895)

2. Pentadenia fritschii (Rusby) Wiehler, comb. nov.

Basionym: Flueckigeria fritschii Rusby, Bull. Torr. Bot. Cl. 21:488 (1894); Kohlerianthus fritschii (Rusby) Fritsch, in Engler & Prantl, Nat. Pflanzenfam., Nachtr. I:300 (1897)

3. Pentadenia isernii (Cuatr.) Wiehler, comb. nov.
Basionym: Columnea isernii Cuatr., Anales Univ. Madrid 4:247 (1935)
4. Pentadenia lophophora (Mansf.) Wiehler, comb. nov.
Basionym: Columnea lophophora Mansf., Biblioth. Bot. 116:145 (1937)
5. Pentadenia microsepala (Morton) Wiehler, comb. nov.
Basionym: Alloplectus microsepalus Morton, Fieldiana, Bot. 28: 523 (1953)
6. Pentadenia nervosa Kl. ex Oerst., Centralamer. Gesner. 57 (1858)
Synonyms: Columnea nervosa (Kl. ex Oerst.) Hanst., Linnaea 34: 400 (1865)
Alloplectus rubidus Morton, Ann. Missouri Bot. Gard. 24:204 (1937); Columnea rubida (Morton) Morton, Baileya 7:58 (1959)
7. Pentadenia sericea (Mansf.) Wiehler, comb. nov.
Basionym: Columnea sericea Mansf., Biblioth. Bot. 116:145 (1937); non C. sericea (Hanst.) Kuntze, Rev. Gen. 2:472 (1981)
8. Pentadenia spathulata (Mansf.) Wiehler, comb. nov.
Basionym: Columnea spathulata Mansf., Notizbl. Bot. Gart. Berlin-Dahlem 14(121):37 (1940)
9. Pentadenia strigosa (Benth.) Hanst., Linnaea 26:211 (1854)
Basionym: Columnea strigosa Benth., Pl. Hartweg. 232 (1846)
Synonyms: Columnea campanulata Benth., ibidem
Columnea macrantha Benth., ibidem
Columnea aurantiaca Decne. ex Planch., Fl. Serres Jard. Eur. 6:45, t.552 (1850); Pentadenia aurantiaca (Decne. ex Planch.) Hanst., Linnaea 26:211 (1854)
Columnea pichinchensis Hanst., Linnaea 34:398 (1865)
10. Pentadenia trollii (Mansf.) Wiehler, comb. nov.
Basionym: Columnea trollii Mansf., in Fedde, Repert. 36:122 (1934)
11. Pentadenia vinacea (Morton) Wiehler, comb. nov.
Basionym: Columnea vinacea Morton, Contr. U.S. Nat. Herb. 29: 38 (1944)
Synonym: Alloplectus vinaceus (Morton) Gibson, Phytologia 23(4):334 (1972)
12. Pentadenia weberbaueri (Mansf.) Wiehler, comb. nov.
Basionym: Columnea weberbaueri Mansf., in Fedde, Repert. 38: 26 (1935)

C. Transfers from Columnea and Alloplectus to Dalbergaria

Dalbergaria Tussac, ampl. Wiehler

Suffrutex erectus vel patens, basi ramosus, ramis crassis, folia opposita subsessiles disticha crassiuscula, folia per paria valde inaequalia, laminae foliorum majorum oblanceolata vel elliptica, folia minora stipuliformia. Sepala subaequalia sed forma varianti. Corolla tubulosa vel inflata, limbo subaequale vel bilabiato. Bacca ovoidea.

Dalbergaria Tussac, Flore des Antilles 1:141 (1811-13)

Synonyms: Vireya Raf., Specchio 1:194 (1814)

Collandra Lem., Fl. Serres Jard. Eur. 3:t.223 (1847)

Columnea L., subg. Collandra (Lem.) Hanst., Linnaea 34:383 (1865); Columnea L., sect. Collandra (Lem.)

Benth., in Benth. & Hook., Gen. Pl. 2:1009 (1876)

Columnea L., subg. Cryptocolumnea Hanst., Linnaea 34: 394 (1865); Columnea L., sect. Cryptocolumnea (Hanst.)

Benth., in Benth. & Hook., Gen. Pl. 2:1009 (1876)

Alloplectus Mart., pro parte, sensu Stearn, Bull. Brit. Mus. (Nat. Hist.) Bot. 4(5):189 (1969)

Type sp.: Dalbergaria phoenicea Tussac, Flore des Antilles 1:141, t.19 (1811-13) = D. sanguinea (Pers.) Steud., see below

Etymology: N. Dalberg, a Swedish botanist, 1730-1820

The genus Dalbergaria can be separated from the rest of the taxa under discussion by its distinct pattern of shoot growth, easily recognizable in field and herbarium, and by the fruit, a colored ovoid berry. The suffrutescent thick stems of these epiphytes usually branch only near the base. The subsessile leaves are in close-set imbricating distichous pairs, of which one is stipule-like, the other large and oblanceolate or elliptic, the pairs alternating in respect to their sizes, giving a fern-frond-shaped appearance to the foliage. The underside of the lamina is often marked with species-distinct red patterns, an aid to pollination by hummingbirds. The axillary inflorescences are hidden from above. The calyx lobes are usually of equal length, with the dorsal lobe narrowed. The corolla is either tubular with a subregular limb, or somewhat inflated with an irregular, bilabiate limb, or Columnea-like in a few species (those of section Cryptocolumnea). In addition to the 26 transfers, well over 40 species await description. Dalbergaria occurs in montane cloud and rain forests from Bolivia to the Guianas and north to Mexico, and on the Greater Antilles.

1. Dalbergaria archidonae (Cuatr.) Wiegler, comb. nov.

Basionym: Columnea archidonae Cuatr., Anales Univ. Madrid 4: 245 (1935)

2. Dalbergaria aureonitens (Hook.) Wiegler, comb. nov.

Basionym: Columnea aureonitens Hook., Bot. Mag. 73:t.4294 (Feb. 1847)

Synonyms: Collandra aureonitens (Hook.) Hanst., Linnaea 26:

209 (1854); Alloplectus aureonitens (Hook.) Stearn, Bull. Brit. Mus. (Nat. Hist.) Bot. 4(5):189 (1969).

Columnea pilosa Lem., Fl. Serres Jard. Eur. 3:t.223 (May 1847); Collandra pilosa (Lem.) Lem., ibidem

Columnea sanguinea (Pers.) Hanst., var. cubensis Urb., Symb. Antill. 2:359 (1901); Columnea cubensis (Urb.) Britt., Torreya 5:215 (1906); Alloplectus

cubensis (Urb.) Stearn, Bull. Brit. Mus. (Nat. Hist.) Bot. 4(5):189 (1969)

Columnea affinis Morton, Fieldiana, Bot. 28:529 (1953); Alloplectus affinis (Morton) Stearn, Bull. Brit. Mus. (Nat. Hist.) Bot. 4(5):189 (1969)

Note: The disjunct distribution pattern of D. aureonitens between continental Colombia-Venezuela and the island of Cuba is no less peculiar than the distribution of the red-spotted form of D. sanguinea between Colombia-Venezuela-Trinidad and the island of Hispaniola. D. aureonitens has some populations with red-spotted laminas on the mainland, just as D. sanguinea has some populations with plain green laminas in Venezuela and Colombia (all collections of the latter sp. from Central America and Peru and Bolivia are likewise without red spots). In both species exists some regional color variation in the bracts, calyx, corolla, and berry. The two related species can be easily and consistently distinguished by a difference in the indumentum of the midvein of the abaxial lamina: sericeous (appressed) in D. aureonitens, and hirsute-villous (erect or spreading) in D. sanguinea. No instance of natural hybridization has been observed in sympatric populations in Venezuela.

3. Dalbergaria consanguinea (Hanst.) Wiehler, comb. nov.
Basionym: Columnea consanguinea Hanst., Linnaea 34:383 (1865)
4. Dalbergaria crassa (Morton) Wiehler, comb. nov.
Basionym: Columnea crassa Morton, Ann. Missouri Bot. Gard. 29: 45 (1942)
5. Dalbergaria darienensis (Morton) Wiehler, comb. nov.
Basionym: Columnea darienensis Morton, Ann. Missouri Bot. Gard. 29:46 (1942)
6. Dalbergaria dimidiata (Benth.) Wiehler, comb. nov.
Basionym: Alloplectus? dimidiatus Benth., Pl. Hartweg. 235 (1846)
Synonym: Columnea dimidiata (Benth.) Kuntze, Rev. Gen. 2:472 (1891); cf. Leeuwenberg, Acta Bot. Neerl. 8:48 (1959)
7. Dalbergaria ericae (Mansf.) Wiehler, comb. nov.
.Basionym: Columnea ericae Mansf., in Fedde, Repert. 36:123 (1934)
8. Dalbergaria eubracteata (Mansf.) Wiehler, comb. nov.
Basionym: Columnea eubracteata Mansf., Biblioth. Bot. 116:146 (1937)
9. Dalbergaria florida (Morton) Wiehler, comb. nov.
Basionym: Columnea florida Morton, J. Wash. Acad. Sci. 27(7): 310 (1937)
10. Dalbergaria guianensis (Morton) Wiehler, comb. nov.
Basionym: Columnea guianensis Morton, Bull. Torr. Bot. Cl. 75:564 (1948)
Synonym: Alloplectus guianensis (Morton) Stearn, Bull. Britt. Mus. (Nat. Hist.) Bot. 4(5):189 (1969)
11. Dalbergaria guttata (Poepp.) Wiehler, comb. nov.
Basionym: Columnea guttata Poepp., in Poepp. & Endl., Nov. Gen. et Sp. Pl. 3:1 (1840)

12. Dalbergaria inaequilatera (Poepp.) Wiegler, comb. nov.
 Basionym: Columnea inaequilatera Poepp., in Poepp. & Endl.,
 Nov. Gen. et Sp. Pl. 3:1 (1840)

13. Dalbergaria kahlbreyeriana (Masters) Wiegler, comb. nov.
 Basionym: Columnea kahlbreyeriana Masters, Gard. Chron.,
 N.S. 17:44 (14-I-1882); ibidem, p. 216 ("217"),
 fig. 32 (18-II-1882)
 Synonyms: Columnea kahlbreyeri Hook. f., Bot. Mag. 108:
 t.6633 (1-VII-1882)
Columnea citrina Morton, Ann. Missouri Bot. Gard.
 29:44 (1942)
Columnea conferta Morton, ibidem

14. Dalbergaria lanata (Seem.) Wiegler, comb. nov.
 Basionym: Alloplectus lanatus Seem., Bot. Voy. Herald 186
 (1854)
 Synonym: Columnea lanata (Seem.) Kuntze, Rev. Gen. 2:472
 (1891); cf. Leeuwenberg, Acta Bot. Neerl. 8:50
 (1959)

15. Dalbergaria pectinata (Morton) Wiegler, comb. nov.
 Basionym: Columnea pectinata Morton, Ann. Missouri Bot. Gard.
 29:50 (1942)

16. Dalbergaria perpulchra (Morton) Wiegler, comb. nov.
 Basionym: Columnea perpulchra Morton, Ann. Missouri Bot.
 Gard. 29:51 (1942)

17. Dalbergaria picta (Karsten) Wiegler, comb. nov.
 Basionym: Columnea picta Karsten, Florae Columbiae 2:105
 (1865)

18. Dalbergaria praetexta (Hanst.) Wiegler, comb. nov.
 Basionym: Columnea praetexta Hanst., Linnaea 34:394 (1865)

19. Dalbergaria pulcherrima (Morton) Wiegler, comb. nov.
 Basionym: Columnea pulcherrima Morton, J. Wash. Acad. Sci.
 35(4):128 (1945)

20. Dalbergaria rubrocincta (Morton) Wiegler, comb. nov.
 Basionym: Columnea rubrocincta Morton, J. Wash. Acad. Sci.
 35(4):129 (1945)

21. Dalbergaria sanguinea (Pers.) Steud., Nom. Bot.(ed.2)1:479
 (1840)
 Basionym: Besleria sanguinea Pers., Syn. Pl. 2:165 (1807)
 Synonyms: Alloplectus sanguineus (Pers.) G.Don, Gen. Syst. 4:
 655 (1837); Collandra sanguinea (Pers.) Griseb.,
 Mem. Amer. Acad. Arts 8:526 (1863); Columnea san-
guinea (Pers.) Hanst., Linnaea 34:384 (1865)
Dalbergaria phoenicea Tussac, Fl. Antill. 1:141,
 t.19 (1811-13); Collandra phoenicea (Tussac) G.Don,
 Loud. Encycl. Pl., Suppl. 2:1402 (1855)
Vireya sanguinolenta Raf., Specchio 1:194 (1814)
?Collandra picta Kl. & Hanst., Allg. Gartenzzeitung
 22:162 (1854); non Lem. (1852)
Columnea sanguinea (Pers.) Hanst., var. trinitensis
 Morton, Contr. U.S. Nat. Herb. 29(1):4 (1944)

Columnea purpurata Hanst., Linnaea 34:386 (1865)
Columnea grandifolia Rusby, Descr. New Sp. S. Amer.
Pl. 126 (1920)
Columnea pallida Rusby, ibidem, p. 125
Columnea viridis Morton, Contr. U.S. Nat. Herb. 29:
38 (1944); Alloplectus viridis (Morton) Gibson,
Phytologia 23(4):335 (1972)
Columnea cinnabarinata Morton & Raymond, Baileya
18(1):6 (1971)

(See note under D. aureonitens)

22. Dalbergaria schimpffii (Mansf.) Wiehler, comb. nov.
Basionym: Columnea schimpffii Mansf., in Fedde, Repert. 36:
122 (1934)
23. Dalbergaria silvarum (Morton) Wiehler, comb. nov.
Basionym: Columnea silvarum Morton, Ann. Missouri Bot. Gard.
29:54 (1942)
24. Dalbergaria stricta (Rusby) Wiehler, comb. nov.
Basionym: Columnea stricta Rusby, Descr. New Sp. S. Amer. Pl.
125 (1920)
25. Dalbergaria tessmannii (Mansf.) Wiehler, comb. nov.
Basionym: Columnea tessmannii Mansf., in Fedde, Repert. 36:
123 (1934)
26. Dalbergaria villosissima (Mansf.) Wiehler, comb. nov.
Basionym: Columnea villosissima Mansf., in Fedde, Repert. 36:
121 (1934)

D. Transfers from Columnea and Alloplectus to Ortholoma

Ortholoma (Bentham) Hanstein, ampl. Wiehler

Corolla tubulosa vel inflata, limbo subaequali vel bibabi-
ato vel lobis dorsalibus in galeam connatis. Fructus bacca.

Ortholoma (Benth.) Hanst., Linnaea 26:209, 184-185 (1854);
cf. Oerst., Centralamer. Gesner. 50 (1858)
Basionym: Columnea L., sect. Ortholoma Benth., Pl. Hartweg. 231
(1846)
Synonyms: Columnea L., subg. Ortholoma (Benth.) Hanst., Linnaea
34:391 (1865)
Trichantha Hook., Ic. Pl. 7:t.666 (1844); see: Benth.,
in Benth. & Hook., Gen. Pl. 2:1009 (1876); Fritsch, in
Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894);
Morton, Contr. U.S. Nat. Herb. 38(1):1-25 (1963);
Morton, Phytologia 22(3):223-224 (1971)
Stenanthus Oerst. ex Hanst., Linnaea 26:209, 184-185
(1854); Oerst., Centralamer. Gesner. 48 (1858); Columnea
L., subg. Stenanthus (Oerst. ex Hanst.) Hanst., Linnaea
34:387 (1865); Columnea L., sect. Stenanthus (Oerst. ex
Hanst.) Fritsch, in Engler & Prantl, Nat. Pflanzenfam.
4(3b):169 (1894)

Pterygoloma Hanst., Linnaea 26:211, 188 (1854); Columnea L., subg. Pterygoloma (Hanst.) Hanst., Linnaea 34:395 (1865); Columnea L., sect. Pterygoloma (Hanst.) Fritsch, in Engler & Prantl, Nat. Pflanzenfam 4(3b):169 (1894) Columnea L., sect. Systelostoma Benth., in Benth. & Hook., Gen. Pl. 2:1010 (1876)

Type sp.: Ortholoma acuminatum (Benth.) Hanst., Linnaea 26:209 (1854); basionym: Columnea acuminata Benth., Pl. Hartweg. 231 (1846)

Etymology: ortho-, true, well-developed; loma, limb.

Ortholoma is a genus of over 70 species of mostly vining or scandent epiphytes with the opposite leaf pairs of equal or unequal size, with a tubular or inflated corolla and a limb varying from subregular to strongly bilabiate. A galea is present in some species with a strongly inflated, wide corolla tube. Ortholoma can be separated from Alloplectus by the type of fruit (a berry), from Corytoplectus by the plant habit, the inflorescence, and the color of the berry, from Pentadenia by the condition of the nectary (a double dorsal gland), from Dalbergaria by the distinct habit of the latter, and from Columnea by the usual absence of the hooded corolla (present only in combination with a subcampanulate-inflated, wide corolla tube). The globose or ovoid berry is usually pink, red, or purple, sometimes white. The genus is distributed from the montane cloud and rain forests of Bolivia to coastal Venezuela, and north to Guatemala; four species occur in the Greater Antilles, and one in eastern Brazil (Ceara).

1. Ortholoma alienum (Morton) Wiegler, comb. nov.

Basionym: Trichantha aliena Morton, Contr. U.S. Nat. Herb. 38(1):5 (1963)

Synonym: Columnea aliena (Morton) Morton, Phytologia 22(3): 224 (1971)

2. Ortholoma ambiguum (Urb.) Wiegler, comb. nov.

Basionym: Alloplectus ambiguus Urb., Symb. Antill. 1:408 (1899)

Synonyms: A. ambiguus, var. chlorosepalus Urb., loc. cit.
A. ambiguus, var. erythrosepalus Urb., loc. cit.

3. Ortholoma anisophyllum (D.C.) Wiegler, comb. nov.

Basionym: Columnea anisophylla D.C., Prodr. 7:542 (1839)

Synonyms: Nematanthus heterophyllum Poepp., in Poepp. & Endl., Nov. Gen. et Sp. Pl. 3:3, t.203 (1840); Columnea heterophylla (Poepp.) Hanst., Linnaea 34:393 (1865)
Ortholoma warscewiczianum Kl. ex Oerst., Centralamer. Gesner. 51 (1858); Columnea warscewicziana (Kl. ex Oerst.) Hanst., Linnaea 34:392 (1865)
Ortholoma vestitum Kl. ex Oerst., Centralamer. Gesner. 51 (1858)

Columnea sanmartensis Rusby, Descr. New Sp. S. Amer. Pl. 127 (1920)

4. Ortholoma calotrichum (Donn. Sm.) Wiehler, comb. nov.
 Basionym: Columnea calotricha Donn. Sm., Bot. Gaz. 40:9 (1905)
 Synonyms: C. calotricha Donn. Sm., var. breviflora Morton,
 Bol. Soc. Venez. Cienc. Nat. 23(101):78 (1962);
Alloplectus calotrichus (Donn. Sm.) Stearn, Bull.
 Brit. Mus. (Nat. Hist.) Bot. 4(5):189 (1969)

5. Ortholoma clarum (Morton) Wiehler, comb. nov.
 Basionym: Trichantha clara Morton, Contr. U.S. Nat. Herb.
 38(1):19 (1963)
 Synonym: Columnea clara (Morton) Morton, Phytologia 22(2):
 244 (1971)

6. Ortholoma cristatum (Griseb.) Wiehler, comb. nov.
 Basionym: Pterygoloma cristatum Griseb., Fl. Brit. W. Ind. 464
 (1861)
 Synonyms: Columnea grisebachiana Kuntze, Rev. Gen. 2:472 (1891)
Alloplectus cristatus (L.) Mart., sensu Fawcett,
 Prov. List. Fl. Jam. 28 (1893), non sensu Mart.
Columnea hunnewellii L.B. Smith, Rhodora 39:275
 (1937)

7. Ortholoma dictyophyllum (Donn. Sm.) Wiehler, comb. nov.
 Basionym: Columnea dictyophylla Donn. Sm., Bot. Gaz. 61:385
 (1916)

8. Ortholoma dissimile (Morton) Wiehler, comb. nov.
 Basionym: Columnea dissimilis Morton, Ann. Missouri Bot. Gard.
 29:47 (1942)
 Synonym: Columnea translucens Raymond, Bot. Notis. 114:351
 (1961)

9. Ortholoma dielsii (Mansf.) Wiehler, comb. nov.
 Basionym: Columnea dielsii Mansf., Biblioth. Bot. 116:145
 (1937)

10. Ortholoma domingense (Urb.) Wiehler, comb. nov.
 Basionym: Alloplectus domingensis Urb., Symb. Antill. 2:357
 (1901)
 Synonym: Alloplectus domingensis Urb., var. microphyllus
 Morton, Contr. U.S. Nat. Herb. 29(1):19 (1944)

11. Ortholoma erythrophyllum (Hanst.) Wiehler, comb. nov.
 Basionym: Columnea erythrophylla Hanst., Linnaea 34:388 (1865)

12. Ortholoma filipes (Oliver) Wiehler, comb. nov.
 Basionym: Columnea filipes Oliver, in Hook., Ic. Pl. 25:pl.
 2428 (1896)

13. Ortholoma formosum (Morton) Wiehler, comb. nov.
 Basionym: Trichantha formosa Morton, Contr. U.S. Nat. Herb.
 38(1):9 (1963)
 Synonym: Columnea formosa (Morton) Morton, Phytologia 22(3):
 244 (1971)

14. Ortholoma herthae (Mansf.) Wiehler, comb. nov.
 Basionym: Columnea herthae Mansf., in Fedde, Repert. 41:146
 (1937)

15. Ortholoma heterophyllum (Oerst.) Wiehler, comb. nov.
 Basionym: Stenanthus heterophyllos Oerst., Centralamer. Ges-
 ner. 48, pl. 5 (1858)

Synonyms: Columnea heterophylla (Oerst.) Hanst., Linnaea 34: 390 (1865); non Roxb.
Columnea grata Morton, Fieldiana, Bot. 18(3-4): 1164 (1938).

16. Ortholoma illepidum (Moore) Wiegler, comb. nov.
Basionym: Columnea illepida Moore, Baileya 8(2):56, f. 19 (1960)
Synonym: Trichantha illepida (Moore) Morton, Contr. U.S. Nat. Herb. 38(1):12 (1963)

17. Ortholoma incarnatum (Morton) Wiegler, comb. nov.
Basionym: Columnea incarnata Morton, Ann. Missouri Bot. Gard. 29:48 (1942)

18. Ortholoma lehmannii (Mansf.) Wiegler, comb. nov.
Basionym: Columnea lehmannii Mansf., in Fedde, Repert. 41:146 (1937)

19. Ortholoma minor (Hook.) Wiegler, comb. nov.
Basionym: Trichantha minor Hook., Ic. Pl. 7:t.666 (1844)
Synonyms: Columnea minor (Hook.) Hanst., Linnaea 34:387 (1865)
Trichantha major Hook., Ic. Pl. 7:t.667 (1844);
Columnea major (Hook.) Hanst., Linnaea 34:388 (1865)
Trichantha bullata Morton, Contr. U.S. Nat. Herb. 38(1):16 (1963); Columnea bullata (Morton) Morton, Phytologia 22(3):224 (1971)
Trichantha teuscheri Morton, Contr. U.S. Nat. Herb. 38(1):21 (1963); Columnea teuscheri (Morton) Moore, Baileya 13(1):16 (1965)
Trichantha elegans Rose ex Morton, Contr. U.S. Nat. Herb. 38(1):23 (1963); cf. Bot. Mag. t.5428 (1824);
Columnea elegans (Rose ex Morton) Morton, Phytologia 22(3):224 (1971)

20. Ortholoma moorei (Morton) Wiegler, comb. nov.
Basionym: Columnea moorei Morton, Baileya 7:55, fig.15 (1959)
Synonym: Trichantha moorei (Morton) Morton, Contr. U.S. Nat. Herb. 38(1):10 (1963)

21. Ortholoma oblongifolium (Rusby) Wiegler, comb. nov.
Basionym: Columnea oblongifolia Rusby, Mem. Torr. Bot. Cl. 6: 98 (1896)

21a. Ortholoma ochroleucum Kl. ex Oerst., Centralamer. Gesner. 51 (1858)
Synonym: Columnea ochroleuca (Kl. ex Oerst.) Hanst., Linnaea 34:393 (1865)

22. Ortholoma parviflora (Morton) Wiegler, comb. nov.
Basionym: Columnea parviflora Morton, J. Wash. Acad. Sci. 35: 127 (1945)

22a. Ortholoma pendulum Kl. ex Oerst., Centralamer. Gesner. 52 (1858)
Synonym: Columnea pendula (Kl. ex Oerst.) Hanst., Linnaea 34: 397 (1865)

23. Ortholoma peruvianum (Zahlbr.) Wiegler, comb. nov.
Basionym: Columnea peruviana Zahlbr., Ann. K.K. Naturhist. Hofmus. 7:8 (1892)

24. Ortholoma pubescens (Griseb.) Wiehler, comb. nov.
 Basionym: Pterygoloma pubescens Griseb., Fl. Brit. W. Ind. 464 (1861)
 Synonyms: Columnea pubescens (Griseb.) Kuntze, Rev. Gen. 2: 472 (1891); Alloplectus pubescens (Griseb.) Fawcett, Proc. List. Fl. Jam. 28 (1893)

25. Ortholoma repens (Hook.) Wiehler, comb. nov.
 Basionym: Alloplectus repens Hook., Bot. Mag. 72:t.4250 (1846)
 Synonyms: Pterygoloma repens (Hook.) Hanst., Linnaea 26:211 (1854) = type sp. of Pterygoloma Hanst.; Columnea repens (Hook.) Hanst., Linnaea 34:395 (1865); Columnea jamaicensis Urb., Symb. Antill. 2:359 (1901)

Note: Hooker described this species from cultivated material said to have come to Europe from northern Colombia, but there appears to have been a mix-up, cf. Stearn, Bull. Brit. Mus. (Nat. Hist.) Bot. 4(5):219 (1969). All field collections of this distinct species originate from Jamaica; I have not found any herbarium material of this species from Colombia. My live Jamaican collection agrees exactly with the type illustration. To regard this species as an endemic of Jamaica agrees, furthermore, with the unusual high degree of endemism of Gesneriaceae on that island: 33 out of 35 species, including all other species of Ortholoma and Columnea.

26. Ortholoma roseum (Morton) Wiehler, comb. nov.
 Basionym: Trichantha rosea Morton, Contr. U.S. Nat. Herb. 38(1):7 (1963)
 Synonym: Columnea rosea (Morton) Morton, Phytologia 22(3): 224 (1971)

27. Ortholoma sanguinolentum (Kl. ex Oerst.) Wiehler, comb. nov.
 Basionym: Stenanthus sanguinolentus Kl. ex Oerst., Centralamer. Gesner. 49 (1858)
 Synonyms: Columnea sanguinolenta (Kl. ex Oerst.) Hanst., Linnaea 34:389 (1865); Stenanthus squarrosus Kl. ex Oerst., Centralamer. Gesner. 49 (1858); Columnea costaricensis Kuntze, Rev. Gen. 2:471 (1891); Crantzia costaricensis (Kuntze) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894)

28. Ortholoma serratum (Kl. ex Oerst.) Wiehler, comb. nov.
 Basionym: Stenanthus serratus Kl. ex Oerst., Centralamer. Gesner. 49 (1858)
 Synonym: Columnea serrata (Kl. ex Oerst.) Hanst., Linnaea 34:390 (1865)

29. Ortholoma tropicale (Morton) Wiehler, comb. nov.
 Basionym: Trichantha tropicalis Morton, Contr. U.S. Nat. Herb. 38(1):13 (1963)
 Synonym: Columnea tropicalis (Morton) Morton, Phytologia 22(3):224 (1971)

30. Ortholoma ulei (Mansf.) Wiesler, comb. nov.
 Basionym: Columnea ulei Mansf., in Fedde, Repert. 38:26
 (1935)

31. Ortholoma venustum (Standl.) Wiesler, comb. nov.
 Basionym: Columnea venusta Standl., Fieldiana, Bot. 17(2):
 210 (1937)

E. Transfers from Alloplectus to Drymonia

Drymonia Mart., Nov. Gen. et Sp. Pl. 3:57 (1829)

Synonyms: Macrochlamys Decne., Rev. Hort., Sér. III, 3:243 (1849)
Polythysania Hanst., Linnaea 26:209, 184 (1854)
Saccoplectus Oerst., Centralamer. Gesner. 43 (1858)
Caloplectus Oerst., ibidem, p.45
Anisoplectus Oerst., ibidem, p.46
Erythranthus Oerst., ibidem, p.46
Calanthus Oerst., ibidem, p.47
Alloplectus Mart., subg. Calanthus (Oerst.) Hanst.,
Linnaea 34:361 (1865)
Alloplectus Mart., subg. Erythranthus (Oerst.) Hanst.,
Linnaea 34:362 (1865)
Alloplectus Mart., sect. Macrochlamys (Decne.) Dalla
Torre & Harms, Gen. Siphonog. 474 (1904)
Crantzia Scop., sect. Calanthus (Oerst.) Fritsch, in
Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894)
Crantzia Scop., sect. Macrochlamys (Decne.) Fritsch,
ibidem.

Drymonia is a genus of over 110 species, consisting mostly of epiphytic vines. This very natural group can be distinguished easily from all other genera of the Gesnerioideae by its uniquely specialized anthers, described in detail by Moore in Baileya 3:111, fig. 43, 1955. The mature fruit, like in Alloplectus, is a fleshy capsule with brightly colored reflexed valves, displaying a cone-shaped mass of funicles and seeds. The genus occurs in moist forests throughout the Neotropics, with a center of distribution in Colombia and Ecuador. The following species had been placed originally in Alloplectus because of an undue emphasis on the shape of the calyx and the corolla, a problem intrinsic to the initial concepts of both genera.

1. Drymonia affinis (Mansf.) Wiesler, comb. nov.
 Basionym: Alloplectus affinis Mansf., in Fedde, Repert. 41:147
 (1937)
2. Drymonia coccinea (Aubl.) Wiesler, comb. nov.
 Basionym: Besleria coccinea Aubl., Hist. Pl. Guian. 2:632
 (1775)
 Synonyms: Alloplectus coccineus (Aubl.) Mart., Nov. Gen. et
 Sp. Pl. 3:57 and index, p. 189 (1829); Columnea
coccinea (Aubl.) Kuntze, Rev. Gen. 2:472 (1891);

Crantzia coccinea (Aubl.) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894)

Alloplectus circinatus Mart., Nov. Gen. et Sp. Pl. 3:56, t.223,f.2 (1829); Columnea circinata (Mart.) Kuntze, Rev. Gen. 2:472 (1891)

Alloplectus patrisii D.C., Prodr. 7:545 (1839); Columnea patrisii (D.C.) Kuntze, Rev. Gen. 2:472 (1891)

3. Drymonia coriacea (Oerst.) Wiehler, comb. nov.
Basionym: Erythranthus coriaceus Oerst., Centralamer. Gesner. 47, pl.3 (1858)
Synonyms: Alloplectus coriaceus (Oerst.) Hanst., Linnaea 34: 363 (1865); Columnea coriacea (Oerst.) Kuntze, Rev. Gen. 2:472 (1891)
Alloplectus ventricosus Donn. Sm., Bot. Gaz. 25:154 (1898)

4. Drymonia doratostyla (Lwbg.) Wiehler, comb. nov.
Basionym: Alloplectus doratostylus Lwbg., Acta Bot. Neerl. 8: 44 (1959)

5. Drymonia erythroloma (Lwbg.) Wiehler, comb. nov.
Basionym: Alloplectus erythroloma Lwbg., Acta Bot. Neerl. 8: 45 (1959)

6. Drymonia foliacea (Rusby) Wiehler, comb. nov.
Basionym: Besleria foliacea Rusby, Mem. Torr. Bot. Cl. 4:420 (1895). The type material, Rusby 338, had been distributed originally as "Alloplectus?"

7. Drymonia hansteiniana Wiehler, nom. nov.
Synonyms: Polythysania parviflora Hanst., Linnaea 26:208-209, fig. 55 (1854); Oerst., Centralamer. Gesner. 50 (1858); Hanst., Linnaea 34:428 (1865); Alloplectus parviflorus (Hanst.) Hemsley, Biol. Centr. Amer. Bot. 2:484 (1882); non Drymonia parviflora Hanst., Linnaea 34:352 (1865)

8. Drymonia hoppii (Mansf.) Wiehler, comb. nov.
Basionym: Alloplectus hoppii Mansf., in Fedde, Repert. 41:148 (1937)

9. Drymonia mortoniana Wiehler, nom. nov.
Synonym: Drymonia parvifolia Morton, Ann. Missouri Bot. Gard. 29:56 (1942); non Drymonia parvifolia Griseb., Fl. Brit. W. Ind. 463 (1862) = D. serrulata (Jacq.) Mart.

10. Drymonia multiflora (Oerst.) Wiehler, comb. nov.
Basionym: Galanthus multiflorus Oerst., Centralamer. Gesner. 47, pl.4 (1858)
Synonyms: Alloplectus multiflorus (Oerst.) Hanst., Linnaea 34: 361 (1865); Columnea multiflora (Oerst.) Kuntze, Rev. Gen. 2:472 (1891)

11. Drymonia pendula (Poepp.) Wiehler, comb. nov.
Basionym: Alloplectus pendulus Poepp., in Poepp. & Endl., Nov. Gen. et Sp. Pl. 3:6, tab.205 (1845)

Synonym: Columnea endllicheriana Kuntze, Rev. Gen. 2:472 (1891)

12. Drymonia semicordata (Poepp.) Wiegler, comb. nov.

Basionym: Alloplectus semicordatus Poepp., in Poepp. & Endl., Nov. Gen. et Sp. Pl. 3:5 (1845)

Synonyms: Columnea semicordata (Poepp.) Kuntze, Rev. Gen. 2:472 (1891)

Crantzia semicordata (Poepp.) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894)

Alloplectus sylvarum S. Moore, Trans. Linn. Soc. London Bot., Ser. II, 4:411 (1895)

Crantzia pseudocordata Cuatr., Anales Univ. Madrid 4(2):249 (1935)

13. Drymonia solitaria (Rusby) Wiegler, comb. nov.

Basionym: Alloplectus solitarius Rusby, Mem. Torr. Bot. Cl. 4:238 (1895)

F. Additional transfers from Alloplectus and Columnea
to other genera

Several species currently in Alloplectus and Columnea belong quite clearly to other genera than those treated above. Some of the more obscure names are represented only by a single type specimen. One important former member of Alloplectus has been transferred already to Nematanthus as N. hirtellus (Schott) Wiegler (Wiegler, 1972a, 1972b).

1. Nematanthus dichrus (Sprengel) Wiegler, comb. nov.

Basionym: Besleria dichrus Sprengel, Syst. Veg. 2:840 (1825)

Synonyms: Columnea dichroa (Sprengel) Kuntze, Rev. Gen. 2:472 (1891); Crantzia dichrus (Sprengel) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894)
Besleria bicolor Schott, Medicin. Jahrb. 6(2):64 (1820); non H.B.K. (1818)

Alloplectus schottii G. Don, Gen. Syst. 4:655 (1837)

Alloplectus dichrous D.C., Prodr. 7:546 (1839); non

Hook., Bot. Mag. 72:t.4216 (1846) = N. hirtellus

Alloplectus angustifolius D.C., Prodr. 7:546 (1839);

Columnea angustifolia (D.C.) Kuntze, Rev. Gen. 2:472 (1891)

Alloplectus pinelianus Lem., Fl. Serres Jard. Eur.

2(8):pl.5 (1846)

Alloplectus concolor Hook., Bot. Mag. 74:t.4371 (1848)

2. Nematanthus villosus (Hanst.) Wiegler, comb. nov.

Basionym: Alloplectus villosus Hanst., in Mart., Fl. Bras. 8:

407, pl.66 (1864); non Hypocyrtta villosa Hook. &

Arn.(1834) = Hypocyrtta fissa (Vel.) Handro & L.B.

Smith

Synonym: Columnea klotzschiana Kuntze, Rev. Gen. 2:472 (1891)

3. Kohleria platylomata (Donn. Sm.) Wiehler, comb. nov.
 Basionym: Diaxema platylomatum Donn. Sm., Bot. Gaz. 61:381 (1916)
 Synonyms: Nematanthus? erianthus Benth., Pl. Hartweg. 231 (1846); Columnea eriantha (Benth.) Hanst., Linnaea 34:391 (1865); non Kohleria eriantha (Benth.) Hanst., Linnaea 34:442 (1865)

4. Alsobia punctata (Lindl.) Hanst., Linnaea 26:207 (1854), type species of Alsobia Hanst., ibidem
 Basionym: Drymonia punctata Lindl., in Edward's Bot. Reg. 28: Misc.63 (1842); Bot. Mag. 70:t.4089 (1844)
 Synonyms: Episcia punctata (Lindl.) Hanst., Linnaea 34:342 (1865)
Columnea septentrionalis Morton, Baileya 15:119 (1967)

5. Vanhouttea lanata Fritsch, in Engler, Bot. Jahrb. 29, Beiblatt 65:16 (1900)
 Synonym: Alloplectus tomentosus Glaziou, Bull. Soc. Bot. France 58, Mem. 3f:515 (1911)

6. Paradrymonia metamorphophylla (Donn. Sm.) Wiehler, comb. nov.
 Basionym: Alloplectus metamorphophyllus Donn. Sm., Bot. Gaz. 52:52 (1911)
 (genus Paradrymonia Hanst., Linnaea 26:207, 1854)

7. Alloplectus savannarum Morton, Bull. Torr. Bot. Cl. 75:563 (1948)
 Synonyms: Columnea steyermarkii Morton, Bol. Soc. Venez. Ci. Nat. 23(101):76 (1962)
Columnea calotricha Donn. Sm., var. austroamericanum Morton, ibidem, p. 78

8. Alloplectus sprucei (Kuntze) Wiehler, comb. nov.
 Basionym: Columnea sprucei Kuntze, Rev. Gen. 2:471 (1891), misprinted as "A." sprucei
 Synonym: Crantzia sprucei (Kuntze) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894)

9. Alloplectus lindenii (Kuntze) Wiehler, comb. nov.
 Basionym: Columnea lindenii Kuntze, Rev. Gen. 2:471 (1891)
 Synonym: Crantzia lindenii (Kuntze) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894)

10. Alloplectus weiri (Kuntze) Wiehler, comb. nov.
 Basionym: Columnea weiri Kuntze, Rev. Gen. 2:471 (1891)
 Synonym: Crantzia weiri (Kuntze) Fritsch, in Engler & Prantl, Nat. Pflanzenfam. 4(3b):168 (1894)

11. Alloplectus boliviensis (Britt.) Wiehler, comb. nov.
 Basionym: Columnea boliviensis Britt., Mem. Torr. Bot. Cl. 4: 238 (1895)

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The 330 species of the Alloplectus and Columnea assembly thus appear to fall within two major groupings. There is, firstly, the Alloplectus alliance with Corytoplectus, Alloplectus, and Drymonia. Within the evolutionary highly advanced family Gesneriaceae, Corytoplectus shows a mixture of relatively "primitive" characters (terrestrial habit, nectary condition), and a feature apparently more "advanced" than in its two allies, the berry fruit. The specialized fleshy capsule of Alloplectus and Drymonia, containing the same type of funicular pulp as the berry in the tribe Episcieae, appears, however, to be just about as "advanced" as the berry. Each fruit type represents a successful end-product, along a different pathway, and each is geared towards particular seed dispersal agents.

Into the second group, the Columnea alliance, belong Pentadenia, Dalbergaria, Ortholoma, and Columnea. The latter three genera each contain about the same number of species. In contrast to former classifications it may be noted that the corolla character is here de-emphasized. The Columnea-type corolla occurs, with some modification, in all four genera (as well as in genera of other tribes, Asteranthera Hanst., and Rechsteineria Regel). Pentadenia, Dalbergaria, and Ortholoma represent the whole range of corolla shapes from tubular with a subregular limb to the hooded Columnea corolla. The significance of the variation and convergence of corolla shapes of these hummingbird flowers still needs to be explored.

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